THE PLOUGH BOY.

BY S. SOUTHWICK.

"He that observeth the wind shall not sow, and he that regardeth the clouds shall not reap."—*Ecclesiastes.*

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BIOGRAPHICAL.

NATHANIEL GREENE.

In the revolutionary war, the man universally acknowledged as next to Washington, if not his equal, was General NATHANIEL GREENE. Of the private character of that distinguished officer, we copy the following delineation from his life, written by Charles Caldwell, M. D. of the university of Pennsylvania.

Without pretending to give a perfect delineation of the private character of Greene, who was personally unknown to us, we hope that the following traits of him as a man, will be aceptable to those, who delight to dwell on his merits as an officer.

His intellect was of masculine texture and strength. Sound, penetrating and capacious, rather than brilliant, judgment and sagacity were its predominant features. He possessed, in a high degree, the capacity to profit by observation and experience, and placed much reliance on that source. Without this qualification, no mind can be practically great; no individual wise.

In his perceptions he was quick and clear. ready in his combinations, forcible in his reasonings, and prompt in his decisions.

His acquaintance with human nature, derived from history and an intercourse with man, was extensive and profound; and, in his apprehensions of the tendency of principles no man committed fewer mistakes. Hence, of a number of schemes of action submitted to his examination, or rising in his own mind, he had a peculiar facility in distinguishing that which best suited in his present condition.—As if guided by the lights of intuition itself, it is not recollected that when left to consult his own judgment, he ever, during his military career, erred in his selection. However extraordinary, or even extravagant, this statement may appear, it is believed to be true.—On these occasions, although deeply thoughtful, yet so rapid were the movements of his mind, that the result seemed an act of perception, rather than deliberation. This was one of the most fruitful sources of his ability as a commander. It enabled him to decide, while others were doubting to employ in action, the time which they consumed in deliberating.

For the zeal and sedulity with which he pursued knowledge, at every period of his life, he had no equal, among officers of rank, in the American army. His portable library was well chosen and rich; and on occasions of the utmost perplexity and danger, when the probability of a night attack forbade him to undress himself, and in the midst of his greatest fatigues, not excepting the evening after a battle, he never retired to rest, until he had spent an hour or two in reading.

Of historians, Hume was his favourite; of metaphysicians, Locke; of poets Shakspeare and Milton; of the ancient classics, Horace. The latter work he carried constantly in his pocket, and read it familiarly, partly for his amusement, and, in part, that he might retain his knowledge of the Latin tongue:—For, although deprived of the advantages of an early and liberal education, his classical attainments had become, by his own industry, in the midst of active engagements and the toils of war, highly respectable. This information is derived from one of the first scholars of our country, who communicates it on the ground of useful knowledge.

He possessed uncommon equability of temper, and, on most occasions, was a perfect model of self-command. Yet he was no less remarkable for the high-toned sensibility and ardour of his mind. He was also capable of great abstraction. Hence, when preparing for action, or engaged in battle, so strong was his excitement, as to render him insensible to every thing but his duty as a commander. All personal considerations being merged in the desire of victory and the love of glory, he seemed unconscious of the danger to which he sometimes exposed himself.

On the score of morality, he was unimpeachable. Roman virtue, in the best days of the republic, was never more unsullied and inflexible than his. Of him it was as true as of the elder Pitt, that "modern corruption had not touched him."

Conscientiously devoted to duty, he never, in his private transactions, intentionally violated punctuality, much less integrity. As a public functionary, his honesty was unquestioned, except in the affair of Banks; and, there, like sterling metal, it was brightened by the ordeal through which it passed. So sound and impenetrable was his whole moral character, that all imputations directed against it, either fell harmless at his feet, or recoiled on those, from whom they proceeded.

For the bubble popularity, inflated by the breath of the multitude, his contempt was deep. Nor had he any respect for those who covet it. The courtier and the sycophant, he held to be weak, or hypocritical and dishonest. With no time-serving disposition, or accommodating flexibility of character himself, but acting steadily on established principles, he considered as dangerous and unworthy to be trusted, all who were governed by different motives. He has been heard to declare, that he would as soon confide his personal safety to a vessel at sea, driven by variable winds, without a steersman, as the management of his own, or any of the concerns of his country, to the direction of an individual, who did not adhere to recognized principles as the guide of his actions.

Resolution of purpose he regarded as the rampart of virtue; and the want of it, as a breach, through which, sooner or later, vice must enter. To waver, therefore, when determination was required, was to forfeit at once his confidence and esteem.

Notwithstanding his rigid devotion to business, his disposition was social, he was fond of rational amusement, and, during his hours of relaxation from severer duties, took great delight in mingling with his friends.

In conversation he was fluent and instructive, always lively, and sometimes playful.—To wit he made no pretensions. His powers of sarcasm were terrible. But he never, by a wanton indulgence of them, gave pain to the unoffending, the modest or the well-bred.—It was the forward and presuming that were doomed to feel him; and he frequently punished the rude and impertinent, by the most poignant retorts.

When conversing with men of enlightened

minds, his favourite topics were political economy, and the principles of government. On these subjects, his views, which were always liberal, had, by reading and reflection, been rendered profound. It was the opinion of his friends, that he was preparing himself for a recommencement of his public career, in a civil capacity. Were this the case, and had his life been prolonged until the organization of the federal government, his station would have been high. Washington would certainly have invited him to his cabinet.

Notwitstanding his firmness and decision, in most things, his disposition was eminently mild and humane. These amiable qualities threw into his public character a degree of softness that was peculiarly attractive.—Hence, as a commanding officer, he never acted with unnecessary harshness, nor inflicted punishment, unless where the good of his country required it.

To this trait he is believed to have been indebted for the preservation of life, during his southern campaigns. The tories, apprised of it, from experiencing its effects, were induced to spare him, when within reach of their rifles; some of them, perhaps, from motives of gratitude; but most of them, from an apprehension, that in case of his death, he might be succeeded by a commander, who would visit their disaffection with greater severities.—Such, at least, is the belief, which he himself is known to have entertained.

In the technical signification of the term, he was no writer. Yet few men knew better the power of words. Hence, in his private and official letters, his language is well selected, and his style, disincumbered of every thing ornamental or redundant, remarkable for its condensity, perspicuity and strength.—His communications descriptive of the battles he fought, are masterly specimens of that kind of writing. The enemy themselves admired and applauded them. Delighted with their simplicity and picturesque character, some of the British officers were heard to declare, that "no man in either army, except general Greene, knew how to describe a battle." Certainly no man described one so well. His letters, on these topics, are rather *pictures* than *accounts* of the actions represented.

In friendship, he was warm, sincere, and steady. As a gentleman and a neighbour, courteous, kind and obliging. Although he did not, during his short residence in Georgia, mingle much in society, yet, strangers and visitors were welcomed to his dwelling, with the open and generous hospitality of the south.

In his diet he was always temperate; at times abstemious. Careful of his health, he often, with a view to the preservation of it, abstained, for a day or two, from animal food. This course he judiciously preferred to the frequent employment of medicinal potions, a practice too commonly pursued in warm climates.

In his domestic relations, he was amiable and exemplary. As a parent he was peculiarly affectionate and indulgent, as far as indulgence can be accounted a virtue. The education of his children, embracing moral and religious, as well as literary instruction, constituted an object of his anxious regard.—To make amends for the defects of public schools, which were, at that period, few and faulty, in the southern states, he employed a private tutor, who resided in his family.

In managing the concerns of his estate, he combined strict method, with liberal economy.

His appearance, although dignified, was not sufficiently imposing to be very forcibly expressive of his character. He had the aspect of a general officer; but it was that of an intrepid, rather than a great one.

His stature, which was nearly six feet, did not, to the eye, seem to rise above the middle standard, on account of the roundness and breadth of his shoulders, and a forward inclination of his neck and head.—His frame was powerful, but defective in symmetry. As he advanced in years, he became somewhat corpulent, which injured still further the proportions of his person: in consequence of an injury received in his youth he was slightly affected with lameness; not, however, in a degree sufficient to impair materially his activity of body. An excellent horseman, he mounted with ease, and rode with elegance. Nor were there many that could surpass him in exercises on foot; and although somewhat weakened in his general health, by exposure and intense application to duty, he vied with the hardiest in toil and fatigue.

His head exceeded the middle size, and was finely moulded. His features were bold, and visage comely, but bore no marked resemblance to either the Greek or the Roman model. His countenance was expressive of the mildness and benignity of the philanthropist, rather than the stern purposes of the warrior. His hair was light, and his complexion, fair and ruddy in youth, became deeply embrowned by the southern climate. His forehead was lofty and expanded, but his eye was by far the finest of his features. It was large and full, though not very prominent, capable of unusual motion, its colour a deep blue, and under high excitement, seemed to swim in liquid fire. On these occasions, his whole countenance was peculiarly irradiated by the workings of his intellect.

ANIMALS.

ON THE FORM OF ANIMALS,

BY HENRY CLINE, ESQ. SURGEON.

From the publications of the Board of Agriculture, England, Vol. IV.

The form of domestic animals has been greatly improved by selecting with much care, the best formed for breeding—but the theory of improvement has not been so well understood, that rules could be laid down for directing the practice. There is one point particularly, respecting which the opinions of breeders have much varied, which is, whether crossing the breed be essential to improvement.

It is the intention of this communication to ascertain in what instances crossing is proper, and in what prejudicial; and the principles upon which the propriety of it depends.

It has been generally supposed that the breed of animals is improved by the largest males. This opinion has done very considerable mischief, and would have done more injury if it had not been counteracted by the desire of selecting animals of the best form and proportions, which are rarely to be met with in those of the largest size.

Experience has proved that crossing has only succeeded in an eminent degree, in those instances in which the females were larger than in the usual proportion of females to males; and that it has generally failed when the males were disproportionally large.

The external form of domestic animals has been much studied, and the proportions are well ascertained. But the external form is an indication only of internal structure. The principles of improving it must therefore be founded on the knowledge of the structure and use of internal parts.

The lungs are of the first importance. It is on their size and soundness that the health of an animal principally depends. The power of converting food into nourishment, is in proportion to their size. An animal with large lungs, is capable of converting a given quantity of food into more nourishment than one with smaller lungs, and therefore has a greater aptitude to fatten.

The Chest.

The external indication of the size of the lungs is the form and size of the chest; the form of which should have the figure of a cone, having its apex situated between the shoulders, and its base towards the loins.

The capacity of the chest depends upon its form more than on the extent of its circumference; for where the girth is equal in two animals, one may have larger lungs than the other. A deep chest, therefore, is not capacious unless it is proportionally broad.

The Pelvis.

The pelvis is the cavity formed by the junction of the haunch bones with the bones of the rump. It is essential that this cavity should be large in the female, that she may be enabled to bring forth her young with less difficulty. When this cavity is small the life of the mother and of her offspring is endangered.

The size of the pelvis is chiefly indicated by the width of the hips, and the breadth of the *twist*, which is the space between the thighs.

The breadth of the loins is always in proportion to that of the chest and pelvis.

The Head.

The head should be small, by which the birth is facilitated. Its smallness affords other

advantages, and generally indicates that the animal is of a good breed.

Horns are useless to domestic animals. It is not difficult to breed animals without them.

The breeders of horned cattle and horned sheep, sustain a loss more extensive than they may conceive; for it is not the horns alone, but also much more bone in the skulls of such animals to support their horns; besides there is an additional quantity of ligament and muscle in the neck, which is of small value.

The skull of a ram with his horns, weighed five times more than another skull which was hornless. Both these skulls were taken from sheep of the same age, each four years old. The great difference in weight, depended chiefly on the horns; for the lower jaws were nearly equal, one weighing seven ounces, and the other six ounces and three quarters; which proves that the natural size of the head was nearly the same in both, independent of the horns and the thickness of the bone which supports them.

In a horned animal, the skull is extremely thick. In a hornless animal it is much thinner; especially in that part where the horns usually grow.

To those who have not reflected on the subject, it may appear of little consequence whether sheep and cattle have horns—but on a very moderate calculation it will be found, that the loss in farming stock, and also in the dimunition of animal food, is very considerable, from the production of horns and their appendages. A mode of breeding which would prevent the production of these, would afford a considerable profit in an increase of meat and wool, and other valuable parts.

The length of the neck should be proportioned to the height of the animal, that it may collect its food with ease.

The Muscles.

The muscles and tendons, which are their appendages, should be large; by which an animal is enabled to travel with great facility.

The Bones.

The strength of an animal does not depend upon the size of the bones, but on that of the muscles. Many animals with large bones are weak, their muscles being small. Animals that were imperfectly nourished during growth, have their bones disproportionately large. If such deficiency of nourishment originated from a constitutional defect, which is the most frequent cause, they remain weak during life. Large bones, therefore, generally indicate an imperfection in the organs of nutrition.

On the improvement of Form.

To obtain the most approved form, two modes of breeding have been practised—one, by the selection of individuals of the same family—called *breeding in-and-in.* The other by selecting males and females from different varieties of the same species; which is called *crossing the breed.*

When a particular variety approaches perfection in form, breeding in-and-in may be the better practice—especially for those not well acquainted with the principles on which improvement depends.

When the male is much larger than the female, the offspring is generally of an imperfect form. If the female be proportionally larger, the offspring is of an improved form. For instance, if a well formed large ram be put to ewes proportionally smaller, the lambs will not be so well shaped as their parents; but if a small ram be put to larger ewes, the lambs will be of an improved form.

The proper method of improving the form of animals, consists in selecting a well formed female, proportionally larger than the male. The improvement depends on this principle, that the power of the female to supply her offspring with nourishment, is in proportion to her size, and to the power of nourishing herself from the excellence of her constitution.

The size of the fœtus is generally in proportion to that of the male parent; and therefore when the female parent is disproportionately small, the quantity of nourishment is deficient, and her offspring has all the disproportions of a starveling. But when the female, from her size and good constitution, is more than adequate to the nourishment of a fœtus of a smaller male than herself, the growth must be proportionately greater. The larger female has also a greater quantity of milk, and her offspring is more abundantly supplied with nourishment after birth.

To produce the most perfect formed animal, abundant nourishment is necessary from the earliest period of its existence, until its growth is complete.

It has been observed, in the beginning of this paper, that the power to prepare the greatest quantity of nourishment, from a given quantity of food, depends principally upon the magnitude of the lungs, to which the organs of digestion are subservient.

To obtain animals with large lungs, crossing is the most expeditious method; because well formed females may be selected from a variety of a large size, to be put to a well formed male of a variety that is rather smaller.

By such a method of crossing, the lungs and heart become proportionately larger, in consequence of a peculiarity in the circulation of the fœtus, which causes a larger proportion of the blood, under such circumstances, to be distributed to the lungs than to the other parts of the body; and as the shape and size of the chest, depend upon that of the lungs, hence arises the remarkably large chest, which is produced by crossing with females that are larger than the males.

The practice according to this principle of improvement, however, ought to be limited; for it may be carried to such an extent, that the bulk of the body might be so disproportioned to the size of the limbs as to prevent the animal from moving with sufficient facility.

In animals, where activity is required, this practice should not be extended so far as in those which are required for the food of man. —*American Farmer.*

RICHMOND, KY. *Nov.* 22, 1822.

EDITOR OF FARMERS' CHRONICLE.

Cumberland Ford, Nov. 14, 1822.

SIR—At this time there have passed this place 45,421 Live Hogs for market—say they are worth $7 each, which in my opinion is a moderate calculation, amounts to $317,947. —5,446 Horses and Mules, at an average of $80 each, makes $435,680.—Only 236 stall-fed steers, as yet, say worth $40 each, makes $9,440. Two or three thousand Hogs, I hear, are on the road to be added to the above list; which when arrived, you shall have the correct amount at the year's end.—If only 2,000 come, they will add to the amount $14,000 more, making in all, (at the lowest calculation of mine) $777,067 in *good money.* I trust the time is not very distant, when Kentucky will restore her credit, and there will be no more relief measures prayed for, nor stop laws passed; which have so much disgraced one of the most profitable and rich states in the Union, whose sons are bold and enterprising beyond any, I believe, in the world.

MECHANICS AND MACHINERY.

THE ROLLER:

ITS USE AND IMPORTANCE.

Mr. Skinner,

Looking accidentally into the Encyclopœdia Britanica, at the article of Agriculture, I found the annexed passage, which you may think deserves to be inserted in your paper, as I do myself, because we suffer in this part of the country, from frequent droughths, and the relief alluded to in this article is not generally known, though certainly no recent invention or discovery.*

Your obedient serv't.

THOMAS W. GRIFFITH.

The roller is an instrument of capital use in husbandry, though scarcely known in ordinary practice.——"In the first place rolling renders a loose soil more compact and solid; which encourages the growth of plants, by making the earth clap close to every part of every root. Nor need we be afraid of rendering the soil too compact; for no roller that can be drawn by two or four horses will have that effect. In the next place ROLLING KEEPS IN THE MOISTURE, AND HINDERS DROUGHTH TO PENETRATE. This effect is of great moment. In a dry season it may make the difference of a good crop, or no crop, especially where the soil is light."—*American. Farmer.*

* Allow me to take this opportunity to recommend to all road makers, the use of an instrument of the kind alluded to, that is, a *roller*, to press down the materials employed in making roads, *before the same is travelled*—a practice which was successfully adopted, on my suggestion, by the President and managers of the Turnpike from Baltimore towards York in Pennsylvania, some years ago.

AGRICULTURE.

Selections, by the Editor of the Plough Boy, from the Domestic Encyclopedia.

No. I.

(CONTINUED.)

"England undoubtedly stands at the head of all practical agriculture. The improvements there in this science for the last half century—those we mean that have stood the test of practical and scientific investigation, are the following:

"1st. The system of farm-yard manure, wherein every decomposable matter, animal and vegetable, is stored to be used on the fields in regular succession.

"2d. The modern practice of using all manures as recently as possible. Formerly they were heaped up and turned over at various times for a twelvemonth till the whole mass could be cut out like butter. It is now well understood that plants are nourished by the gases and juices formed during the gradual decomposition of the manure, all of which are lost in the old plan.

"3d. The practice of farm-yard feeding, and sheep-folding connected with the turnip husbandry.

"4th. In the substitution of fallow crops for fallows, connected with the horse-hoeing husbandry. It is true, that fields are sometimes so foul with weeds that a fallow is necessary. In England, when a farmer is compelled to fallow a field, he lets the weeds grow into blossom and then turns them down: in America a fallow means a field where the produce is a crop of weeds *running to seed*, instead of grain.

"5th. In the more spirited husbandry of turnips and potatoes for feeding cattle: and of carrots in sandy lands. A farmer in Lancashire will have no scruple in manuring for a potatoe crop at the rate of ten pounds sterling per acre. Ploughing up the potatoes, and then one ploughing for a wheat crop insures a profit.

"6th. In never permitting two grain crops to succeed each other. A fallow-crop (that is, a horse-hoed crop) or a grass crop, always intervenes.

"7th. In selecting for pastures and meadows, those nutritive grasses that do not destroy each other, and that spring up at the same season. Curtis has done a great deal towards this; but his directions will not exactly answer for this climate: the principle will.

"8th. In the great attention paid to agricultural machinery: to threshing-mills—to chaff-cutters—to drills and drill ploughs—to scarificators, &c. &c.

"9th. In England they understand the use of lime, and the mixing of sand with clay, and clay with sand, &c. better than we do. Their climate admits of the stimulating manure of Gypsum but partially: it is too moist.

"10th. In this country we omit to cultivate plants of the most obvious profit. Madder, weld, poppies for oil, lavender, mint, &c. for essential oils. All these have been tried (even in Pennsylvania) with so much success on a small scale, that they well deserve trial on a larger.

"In this review, we have followed the example of the pamphlet under revision; we have preached a long sermon with little regard to the text, as a practice not uncommon. General Humphreys has adopted for his motto, "from grave to gay, from lively to severe," which no doubt is intimately connected with the subject of agriculture.—C."

The following tract on agriculture is also by Mr. Cooper, the present editor of this Encyclopedia.

"Agriculture is the art of selecting and raising to the best advantage, those vegetable substances that serve for the use of man.

"It is not my intention to enter at large into the extensive theory of this first of arts, or to give a detailed account of practices adopted or recommended by the numerous writers on this prolific subject; but a few *general* observations, hitherto seldom mentioned in the connexion now presented to the reader, may furnish more accurate ideas than commonly prevail.

"The theory of agriculture related to 1st. the properties of the plant itself. 2d. of the climate and soil in which it is placed. 3d. The mode of accelerating its growth and increasing its size.

"Writers on agriculture, ignorant for the most part, of the physiology of animals as well as vegetables, have usually considered and treated of plants as inanimate beings: they are not so.

"Every plant is the production of an organised seed, endued with the property of vegetable life, and of being acted upon by appropriate stimuli. This vegetable life is originally excited and subsequently continued by the application of what may be called *natural* stimuli, much in the same manner as in animals. Thus the pollen of the pointal received by the chive, and thence propagated to the seed vessel, impregnates the seed, and excites the action of the living fibre, which afterwards proceeds according to the laws of organization peculiar to each plant. This action is continually renewed by the application of vegetable food by means of which the germ is dilated till the plant arrives at its full growth.—All this is perfectly analogous to the impregnation of the animal germ in the ovarium, and its subsequent growth to full age and size.

"In animals, the muscular fibres have the property of contracting on being irritated.—*Irritabiliy*, as it is called. So have vegetable fibres. The sensitive plant, the hedasyrum, the dionæa muscipula of Carolina, the phenomena of plants growing in a dark place and turning to the light, are proofs of this, if not of voluntarity. The separated twigs of hedasyrum, are irritable, like a separated muscle. Mr. Howard has lately discovered the same property in the pollen, on the application of alcohol. (Trans. Linn. Society of London.)

"Animals have feeling, perception, or *sensibility*, and the power of voluntary motion.—So have plants.

"The facts adduced by Percival, Smith, and Darwin, and the whole class of phenomena relating to their search of food, and the propagation of their species, seems to put this beyond reasonable doubt. To which may be added the habits and customs of the parasite plants.

"Animals, though perfect in all their parts, may be stinted in their growth by too small a quantity of food, and by other means; and this dimunition will affect the size of their offspring. The case is precisely the same with plants. By plenty of food and favourable situations, animals may be increased in size.—So may vegetables. By breeding from selected couples of a large size, the size of the animal offspring is increased. Hereon was founded the successful practice of the greatest cattle breeder in England, Mr. Bakewell of Dischley; and the same set of experiments has been repeated with equal success on plants by Mr. Coopor of New Jersey. Mr. Bakewell increased the flesh on particular bones of his cattle, and propagated this propensity.—Mr. Cooper has in like manner propagated not merely increase of size, but increase of size in particular parts of the plant, and propensities to earlier vegetation.

"In animals, appetite may be provoked, and digestion assisted, by the artficial stimuli, of what physicians call *Condiments*, salt, pepper, wine, acids, bitters, &c. Such also is the property of vegetables. Their hands, mouth, and stomach, are in the soil; and by the application of artificial stimuli, such as lime, common salt, alkalies, plaister of Paris, &c. their roots may be excited to want, to seek, to take in, and to digest more nutriment than they would otherwise use.

"Animals may be surfeited with too much nourishment. So a plant will die if set in a mere dung heap. Animals may be poisoned. So may plants. Every metalic combination for instance, except oxygenated and carbonated iron, and calx of manganese (and lead?) in small quantities, being poisons to the vegetable.

"By the artificial stimuli of condiments, animals may be excited too much, and indirect debility will ensue. So is it with plants. In like manner, excess of these artificial stimuli will take away their beneficial effects, as a half a pint of wine may assist when a bottle will injure digestion. Thus, from the experiments of Sir John Pringle, and Dr. Watson, (Bishop of Landaff) it appears that a small quantity of common salt is a septic to the animal fibre, and a manure to vegetables, while a large quantity is the domestic antisceptic of cookery, and destroys vegetation altogether. So in the experiments of Judge Peters, two bushels of gypsum will produce a luxuriant crop; 5 or 8 will prevent it.

"In animals, when parts of muscular or other fibres, are weak, diseased and dying, ar-

tificial stimuli can be applied to excite an action in the living and healthy parts, by which the dead are separated and sloughed off. So in plants, the artificial stimulus of those substances which are not manures in the sense of affording nourishment to the plants, but only as exciting a stronger and more healthy action in the living fibre, will kill the weak and diseased roots, while they invigorate the more healthy. This is the mode of action (in part) of lime, gypsum, salt, &c. usually classed among manures, but which do not enter into the composition of the plant itself.

"Animals are resolveable into gases, lime and phosporic acid. There is no peculiar animal on earth. The phenomena of marine animals, the experiments of Vauquelin on the production of lime in the hen, and some other facts, make it probable, that the lime of the bones, as well as their phosphoric acid, is the product of animalisation.

"Vegetables are resolveable into gases and fixed alkali, by fire; by putrefaction, their alkali is either decomposed, or escapes; for no fixed alkali is found on the incineration of vegetables which have undergone completely, the putrefactive process. Both vegetables and animals contain in their fluids accidentally, unessential quantities of iron, manganese, and neutral salts. Thus the blood contains iron, albumen, mucilage, the serum, urine, uric, and phosphoric acids, with bases of lime, soda, volatile alkali. So in plants, nitre is found in borrage, in nettles, &c. and oxalates in some. Hence it appears, that the essentially component parts of animals and vegetables consist chiefly of two or three gases.

"Again. Animal fibres are made from plants. So true is the scripture exclamation that all flesh is grass! An ox and a sheep are made up of vegetables, and so are we who devour them. Nothing is nourishment to an animal but what was originally a vegetable. In like manner, nothing is nourishment to a vegetable, but what enters into the permanent composition of a vegetable. We find large plants grow in pure sand (Vanhelmont,) in sand and clay, in common clay, in limestone, in limestone and sand, limestone and clay, and in all the combinations of these common earths, nay even in sulphur, in shot, in pounded glass, but we do not find that these earths, or either of them, are any permanent and essential parts of the composition of a plant any more than of an animal. In a human body of 200*lb*. weight, we may find about the fourth or fifth of an oz. of common salt, and we may *perhaps* find in clover the same proportion of gypsum, but these are accidental parts of the composition.

(*To be continued.*)

GARDENING.

LETTERS ON GARDENING.

No. VII.

JULY, 1821.

My dear Son,

The principal work in your garden is done. If you have faithfully attended to my previous directions, you may now with a small additional care, feast upon its bounties. As your plants are all advancing with great rapidity, take care that they do not crowd each other—destroy the superfluous ones in due season; better have too few than too many plants.

Sweet Corn

Should now be dressed for the last time.—The stalks should be set upright, the suckers carefully twisted off, and the hill raised and finished with the large hoe.

Celery

"Plants that have arrived to a sufficient size, should now be finally planted out into trenches. Choose for this purpose a piece of rich ground, in an open exposure, mark out the trenches by line, ten or twelve inches wide, and allow the space of three feet between trench and trench. Dig each trench a moderate spade deep, laying the dug out earth equally on each side, between the trenches—lay three inches deep of very rotten dung in the bottom of each trench; then pare the sides, and dig the dung and parings with an inch or two of the loose mould at bottom, incorporate all well together, and put in the plants.

"Previous to planting, trim the tops of the plants, by cutting off the long, straggling leaves, and also the ends of the roots, leaving the former about six inches long, and the latter two.

"Let them be planted with a dibble, in single rows, along the middle of each trench, allowing the distance of four or five inches between plant and plant. As soon as planted, give them a plentiful watering, and let them be shaded until they strike root and grow.—Small sticks may be placed across the trenches, and on these boards or pine plank, laid lengthwise, or pine or cedar boughs may be laid over the plants, which are to be taken off as soon as they begin to grow.

"The plants, when grown to the height of eight or ten inches, should have their first landing. This must be done in a dry day—the earth should be broken small, and laid in gently to both sides of the plants; always taking care to leave the hearts and tops free, repeating it every ten or twelve days, till they are blanched off a sufficient length for use."

Turnips.

Unless your garden contains more than an acre, there will be no room for this plant.—The field, for several reasons, is the best place for the growing of turnips. You may occasionally sprinkle some seed upon vacant spaces, or where you have already taken off an early crop, as peas or magic onions; but you should look to the field for a general supply of this valuable root.

In cultivating the turnip upon old ground, you require the assistance of all those farming implements, which can most effectually mix and pulverize the soil. Upon new land, just burnt over, if good seed is properly sown and well harrowed in, a good crop may be expected without further trouble; but upon land, however rich, it is far otherwise. Their use in feeding cattle is so very great, that every farmer should strive to raise more than is wanted for domestic consumption.

The field cultivation of turnips has introduced into Great Britain an important revolution in the art of husbandry. Before the introduction of this root, it was impossible to cultivate their light soils successfully, or to devise suitable rotation for cropping them with advatages. It was also a difficult task to support live stock through the winter and spring months; and as for feeding and preparing cattle and sheep for market, during these inclement seasons, the practice was hardly thought of. The benefit derived from turnip husbandry to the English farmer is therefore great.

Although the scorching sun summers may prevent our deriving as much profit from the cultivation of this plant, as the more temperate and moist climate of England furnishes to the agriculturists of that country, yet experience warrants the assertion, that with the same skill and labour which they bestow, we should seldom miss a crop. Nor does necessities require that we should ever cultivate the turnip so extensively as they do; for in this country, no good farmer finds it a difficult task to keep his land free from weeds. Assisted by our arid sun, one or two ploughings never fails to destroy all vegetation; and we can raise grass for our stock in any quantity, and make it into hay with the greatest facility. Besides, we have the advantage of Indian corn, a grain peculiarly suited to our wants, and entirely denied to the English farmer.—But in their turnip crop they have perhaps a full compensation. The severity likewise of our writers, renders turnips of less value here.

[TO BE CONTINUED.]

PLANTING OF STONE FRUIT.

On this subject, one pertinent fact faithfully related, is worth forty curious conjectures, and the following is such an one. On the 28th day of November, 1775, I removed a cherry-tree, the body of which was thicker than the calf of my leg, and on the 10th of June next following, gathered six pounds of very fine cherries from it—that is six months and fourteen days from the planting of the tree. Now, if this be an extraordinary fact, may we not set down the 28th day of November as the best day in the year for planting cherry-trees? The hole in which this tree was planted, was digged about eight inches deep: and a stake firmly fixed near the middle of it. The tree was then bound to the stake, so as that the roots were four inches shallower than as they stood where the tree grew originally. The earth was then thrown into the hole until it was level with the surface of the ground and immediately plentifully watered so as to carrry the earth among the roots: and then while the surface was yet wet, about eight inches more earth was added,

which consequently covered the body of the tree so much deeper than it grew, yet leaving the roots not so deep as they grew. Conjecture may be allowed to say, that in the season vegetation had entirely ceased, and the buds for next year's growth were perfectly formed, and ready to grow with the first appearance of the spring. Young peach-trees, removed but a small distance, at the time their blossoms are just beginning to open, will sometimes ripen their fruit the same fall; but their growth in the next year, will not be so vigorous as of those planted between the middle and last of November, or those planted early in the spring. The essential points in planting of fruit trees, are, that they be planted rather shallower than they originally grew—that they are kept firm and steady in their places, and, that the water run from them both in the winter and in the spring, rather than toward them. There is one observation in an old almanac, perhaps twenty or thirty years old, that is well worth remembering, because it is true, that "a free use of fine ripe fruit in this country, would on an average, add seven years to the life of each citizen, in addition to the advantages of sound health, and the indulgence of the highest luxury the world ever did or can afford." T. G.

Metropolitan.

THE PLOUGH BOY.

ALBANY: TUESDAY, DECEMBER 24, 1822.

FOR THE PLOUGH BOY.

NEW-YORK *vs.* VIRGINIA—

and visa versa—a challenge.

Virginia challenged New-York, Sir Charles *vs.* Eclipse—$10,000.

It is well known as soon as Eclipse came in sight of Sir Charles, that he shrunk from the trial of speed, under a pretext of being crippled. In course, Eclipse returned in triumph to the proud state of New-York which excels in every thing.

Challenge No. II.—Virginia as if in retaliation, now holds forth a challenge on a bet of $500 bull against bull.

Challenge No. III.—To be even with Virginia, and tenacious of the glory of New-York, which must not be excelled in any thing.

I now offer a bet of $1000—hog vs. hog, to eclipse Virginia, as well in weight, size, smallness of bone, just proportions and aptness to fatten, to be exhibited at the next Cattle Show on York Island, where the Virginia hog may be sent by water.

JOHANNES UNDERDONK.

Rensselaer Co. N. Y.

P. S. If the Virginia hog does not weigh 1492 lbs. he is beat already.

PLOUGH BOY SUMMARY.

FOREIGN AND DOMESTIC.

In our summary of this day, we have to record—

The death, on the 14th ult. of Robert Heysham, late deputy naval officer for the port of Philadelphia, and an officer in the revolutionary war, aged 62:——The establishment of a *Lithographic Press*, at the city of Washington, by Mr. Henry Stone. Colours are laid upon a smooth surface of marble, and various beautiful design for needle-work, &c. printed off with great facility. The invention of Lithography is due to the Germans, and its great advantage is, to reduce the prices of pictures, and of every species of engraving. It is expected Mr. Stone will meet with the success due to his merit and enterprise:——The death, on the 13th ult. of John Richards, at his residence near the Spanish Churches, Montgomery county, Pa. in the 70th year of his age; a distinguished whig, during the revolutionary struggle, and repeatedly since a useful member of the State legislature, and of congress:——The death of Gerrit Powel, of Hebron, Washington county, N. Y. on the 13th ult. occasioned by attempting to jump from his wagon, when he fell under the wheel which passed over and crushed him in so shocking a manner, that he died the next night:——The return from England, of our celebrated countryman, *John Randolph*, in renovated health:——The remarkable size of a beet, raised by Samuel Young, of Ballston, viz.—2 feet 4 and a half inches in length, 19 and a half inches in circumference, and weighing 18 pounds; but we had scarcely recorded this item, when we turned to an article in a New-York paper, stating that Mr. Falley, of Sanduskey, has raised a beet, from the seed of the Bonaparte sugar beet, which, after trimming off the leaves, weighed 30 pounds:——The passage of no less than seven bills of divorce, at the late session of the New-Jersey Legislature, viz. Sarah Tenbrook from her husband George Tenbrook; Joanna King from John King; Francis Redstreak from Nancy Redstreak; Simeon Reynolds from Rhoda Reynolds; Sarah Naylor, from ——— Naylor; Deborah Merrit from Henry Merrit; and Electa Wingate, from Benjamin Wingate; a pretty large batch of matrimonial malcontents for one session, when we consider the small size of the state:——The establishment of three new banks in New-Jersey, viz. One at Salem, a steam-bank—one at Amboy, a whale and seal fishing bank, and another to improve the salt marshes, in the county of Bergen, which have been redeemed from the tide-waters by the enterprise of John Swartwort and brothers:——The appointment of Mahlon Dickerson, Senator to congress, for the state of New-Jersey:——The melancholy accident which lately happened in Schuylkill county, Pa. where a farmer, by the name of Fries, in shooting at a deer, missed the animal, but wounded four of his children, who stepped from behind a hillock, in the direction of the shot, at the moment he fired; the eldest, a young woman of 21, was mortally wounded, and expired shortly after in great agony; the other three are expected to recover:——The receipt of intelligence from Liverpool, to the 10th of November, by the arrival of the packet Hercules, capt. Gardner, at New-York; by which it appears, that the political state of Europe was still very feverish and unsettled. The approaching congress at Verona, was looked to with great solicitude; and the apprehended influence of Russia, in that body, had excited no small degree of jealousy on the part of France. The revolutionary state of Spain is deemed, at the same time, dangerous to the general interest of Monarchy. Ireland was still the theatre of bloody disorders; the county of Cork in a very desperate state; the peasantry warring against tithes; and firing houses, and murdering their inhabitants, the regular night-work of the disaffected. The Greek cause was successful as late as the 17th of September. There was a splendid eruption of Mount Vesuvius on the night of the 6th of Sept.:——The discharge of a juryman, in a criminal cause, at New-Castle, Del. for disbelieving the Bible, a future state of rewards and punishments, and the immortality of the soul:——The death, on the 22d ult. at Salisbury, N. C. of Archibald Henderson, eminent as a lawyer, statesman, and parliamentary speaker:——The death, at Philadelphia, Oct. 31st. of the venerable Jared Ingersoll, President of the Supreme Court of Pennsylvania, which was then in session, and the remaining members of which, together with the bar, publicly manifested the highest respect for the memory of the deceased:——The death, by the yellow fever, at Pensacola, of Samuel Niles, son of the worthy editor of the Weekly Register, of Baltimore, aged 22 years—a youth of the fairest promise:——The death of Thomas H. Cushing, collector of the port of New-London, Con. aged 67.—He was a soldier of the revolution; was a captain, under St. Clair, in 1790; and a brigadier-general in the late war, at the close of which he was appointed collector of New-London:——The safe arrival, at New-York, on the 26th ult. of the famous race-horse, ECLIPSE, from the scene of his triumph, the race-course at Washington:——The appearance of a new work, from England, and republished in Philadelphia, entitled "The death bed confessions of the late Countess of Guernsey," said to be highly seasoned with anecdotes of court intrigues, &c. but whether genuine or not is at present problematical:——The death of Henry Klinefelter, of Shrewsbury township, Penn. suffocated, by foul air, in descending the well of Peter Symson:——The conviction, at Lincoln, N. C. of the famous counterfeiter Twitty; sentence, to be imprisoned 3 years, pay a fine of 2,500, stand in the pillory 1 hour, and receive 25 lashes. He has appealed to the Supreme Court:——The arrival, at Norfolk, on the 22d ult. of Don Joseph Manuel De Loizaga, ambassa-

dor from the Mexican Empire to the government of the United States, with his Secretary, Don Joseph De Torres, and six other persons attached to the legation:——The death of Capt. Allen, the gallant commander of the U. S. schooner Alligator, and four of his crew, on the 10th of November, in boarding a piratical vessel, near Matanza. Capt. Allen received two musket balls through his body;—but the Americans succeeded in capturing the Pirate, having previously re-captured from this, and several other pirates, who escaped, 5 valuable American vessels:———The appointment of Lord Amherst as British Governor-General of India:——The consent of the king of Portugal, by a solemn oath, on the first of October, to support the new constitution, adopted by the Cortes:——The arrival, in London, of Captain Franklin, the intrepid traveller in the arctic regions:——The death of Mrs. Garrick, relict of the celebrated dramatist, on the 16th of Oct. aged 98:——The order of Mahomet, Ali Pacha, for establishing literary and scientific institutions in Egypt, on the plan of the French national Lyceum, at the head of which he has placed Noureddin Effendi, a learned musselman, educated in Europe:——The flourishing state of the Medical College at Fairfield, in Herkimer county, according to an article in the Herkimer American:——The sale of a part of the pews, in the new Universalist chapel, at Boston, for 15,000 dollars; those remaining are expected to bring a sum more than equal to the cost of the building, which was 19,000:——The appointment of Richard Law, as collector of the revenue for the port of New-London, vice Gen. Cushing, deceased:——The destruction of the powder-mill at Fairfield township, Penn. by an explosion; the proprietor, Mr. Lemon, was shockingly burnt; the friction of the machinery was the cause:——The recommendation of Nicholas Biddle, as a candidate for the office of President of the Bank of the U. S. by the delegates, appointed by the Stockholders for that purpose:——The quantity of produce, raised at the alms-house farm, in Salem, Mass. the present year, which is stated at 1,000 bushels of corn, besides an abundant supply of potatoes and other vegetables:——The remarkable fact, that at a late sale of pictures in Caroline co. Va. a single print of the race-horse Eclipse sold for twenty-four dollars, whilst a splendid portrait of Washington, in a gilt frame, was knocked off at two dollars and fifty cents, and another of Jefferson for one dollar and fifty cents!——The murder of Mr. Scamps, of Natchitoches, by a man of the name of Morrow, which took place in Louisiana, early in Sept. They were travelling together, Morrow on foot, Scamps on horseback, and stopping on the road side to take refreshment, Morrow watched an opportunity, and knocked out the brains of his companion, severed his head from his body, rifled his pockets and made off; but the wretch was overtaken and apprehended shortly after in the territory of Arkansas:———The meeting of the Second Session of the 17th Congress, which commenced on the third instant. The message of the President (says the Editor of the *New-England Farmer*) commences with a favourable view of the political system of the United States, which will not call for augmented cares but states that other causes exist which are highly interesting as well to the United States as to the whole civilized world. It gives a pleasing view of our commercial relations with Franceand Great-Britain—States that the decision of his Imperial Majesty the Emperor of Russia on the question submitted to him by the United States and Great-Britain, concerning the construction of an article of the Treaty of Ghent, has been received. and that a convention has since been concluded between the parties, under the mediation of his Imperial Majesty, to prescribe the mode of carrying the article into effect, in conformity to the decision—It informs that a Territorial Government has been established in Florida—That the fiscal operations of the year have been more successful than was anticipated at the commencement of the last session of Congress, and that there is now a surplus in the treasury, and a greater one is anticipated—It commends the organization of the United States' Army—Speaks highly of the Military Academy—Remarks on the piracy of the West Indies as of a recent date, and of the efforts of the U. States to suppress it—States that a serious malady has deprived us of many valuable citizens at Pensacola, and checked the progress of some of those arrangements which are important to the territory—That the Lead Mines require an agent skilled in mineralogy—That the Cumberland road needs repairs—That our manufactures have increased and are increasing—It gives a concise view of the aspect exhibited by foreign nations, which shows that the U. States, as a member of the great community of nations, have rights to maintain, duties to perform, and dangers to encounter—The situation of Spain and the independent Governments south of the U. S. is concisely adverted to—The situation of the Greeks is spoken of with feeling, "that such a country should have been overwhelmed, and so long hidden as it were from the world under a gloomy despotism;" but "a strong hope is entertained that these people will recover their independence, and resume their natural station among the nations of the earth"—The effort which has been made in Spain and Portugal to improve the condition of the people is mentioned as consoling to all benevolent minds, and the President observes, that "When we see that a civil war of the most frightful character rages from the Adriatic to the Black Sea; that strong symptoms of war appear in other parts, proceeding from causes which, should it break out, may become general, and be of long duration; that the war still continues between Spain and the Independent Governments, her late Provinces, in this hemisphere; and that it is likewise menaced between Portugal and Brazil, in consequence of the attempt of the latter to dismember itself from the former; and that a system of piracy of great extent is maintained in the neighbouring seas, which will require equal vigilance and decision to suppress it; the reasons for sustaining the attitude which we now hold, and for pushing forward all our measures of defence with the utmost vigor, appear to me to acquire new force."

CURED FISH.

Dr. Mac Culloch, of Edinburgh, has ascertained, that the antiseptic quality of Sugar is sufficient to preserve fish in the most excellent condition. He states that this substance is so active, that fish may be preserved in a dry state, and perfectly fresh, by means of sugar alone, and even with a very small quantity of it. He has thus kept salmon, whiting, and cod, for an indefinite length of time; and by this simple means fresh fish may be kept in that state some days, so as to be as good when boiled as when just caught.

It is added, that "if dried, and kept free from mouldiness, there seems to be no limit to their preservation; and they are much better in this way than salted. The sugar gives no disagreeable taste. This process is particularly valuable in making what is called *kippered salmon*; and the fish thus preserved are far superior in quality or flavour to those which are salted or smoked. If desired as much salt may be used as to give the taste that may be required; but this substance does not conduce to their preservation. In the preparation it is barely necessary to open the fish, and to apply the sugar to the muscular part, placing it in an horizontal position for two or three days, that this substance may penetrate. After this it may be dried; and it is only necessary to wipe and ventilate it occasionally to prevent mouldiness. A table spoonful of brown sugar is sufficient, in this manner, for a salmon of five or six pounds weight; and if salt be desired, a tea spoonful or more may be added. Saltpetre may be used instead, in the same proportion, if it be desired to make the kipper hard."—*Late London Paper.*

A man who has the appearance of order and economy in his family, who does not permit his sons to "hoe corn in silk breeches," nor to roll logs in ruffled shirts, nor to wear their best clothes on common occasions, nor suffer his daughters to make butter and cheese in chintzes and muslins, nor sweep the kitchen in silks and laces, will sooner be trusted, and stand higher in the estimation of all sensible people, than any other man of equal property, who sets up for gentility, with a family of smart sons and dashing daughters, the beaus and belles of the neighbourhood, the former calculating to live on their wits, and the latter expecting to be maintained by their beauty, and all but worshipped for their accomplishments.

New-England Farmer.

POETRY.

Selected.

MORNING.

But who the melodies of morn can tell?
The wild brook bubbling down the mountain's side,
The lowing herd, the shepherd's simple bell,
The pipe of early shepherd, dim descried
In the lone valley; echoing far and wide
The clamorous horn along the cliffs above,
The hollow murmur of the ocean-tide,
The hum of bees, and linnet's lay of love,
And the full choir that wakes the universal grove.

The cottage curs at early pilgrim bark;
Crown'd with her pail, the tripping milkmaid sings;
The whistling ploughman stalks a-field; and hark,
Down the rough slope the pond'rous wagon rings;
Through rustling corn, the hare astonish'd springs;
Slow tolls the village clock the drowsy hour;
The patridge bursts away on whirring wings;
Deep mourns the turtle in sequester'd bow'r;
And the shrill lark sings clear from her aerial tow'r. BEATTIE.

TWILIGHT.

BY MONTGOMERY.

I love thee, Twilight! as thy shadows roll,
The calm of evening steals upon my soul,
Sublimely tender, solemnly serene,
Still as the hour, enchanting as the scene.
I love thee, Twilight! for thy gleams impart
Their dear, their dying influence to my heart,
When o'er the harp of thought, thy passing wind
Awakens all the music of the mind,
And joy and sorrow, as the spirit burns,
And hope and memory, sweep the chords by turns;
While Contemplation, on seraphick wings,
Mounts with the flame of sacrifice and sings.
Twilight! I love thee; let thy glooms increase,
Till every feeling, every pulse is peace;
Slow from the sky, the light of day declines,
Clearer within, the dawn of glory shines,
Revealing in the hour of nature's rest,
A world of wonders in the poet's breast.

NOT WALNUT, alias KNOT WALNUT, alias POPLAR WOOD.

By foreigners 'tis often said,
That yankees in the way of trade,
With all their moral pious preaching,
Are very fond of over reaching—
Nay, some can give the world a beating
In most ingenuous downright cheating;
And rather than to lose the nack,
E'en their own nation they'll attack;
Will over reach and cheat each other,
A parent, sister, or a brother.
No doubt this censure's too severe,
And close examined 'twould appear,
Our nation's neither worst nor best,
But very much like all the rest.
'Tis very true not all are good;
Witness a load of poplar wood,
Which Clod in Boston carried down,
To quiz some one in that great town;
A cockney came to overhaul it,
'Pray friend, what kind of wood d'ye call it?'
'*Not* walnut, sir, and very good;
Walnut, you know, is the best of wood,
And may I be to atom's blow'd,
If e'er you *see'd a sleeker load.*'
Knot walnut, it looks very nice;
'Drive to my house, and name your price,
With neatness stow your wood away,
Upon the nail you'll have your pay.'
'Tis done. In charging Clod's not bashful,
So home he goes with purse of cash full,
Our cit put on the fire a junk,
Which mouldered just like rotten punk,
And most unpleasantly it smelt,
While not one ray of heat was felt.
Our cockney now smelt out the jest,
And thought to rave it was not best,
But turn it off with pleasant joke,
And let the matter end in smoke.
So when next time he met the clown,
Accosting him without a frown,
'Pray friend, have you some more knot walnut?'
'*Ees sir*, I got a plenty *on it.*'
'Well bring me down another load,
And near each engine see some stow'd,
For when fire rages, I've no doubt,
A stick or two will put it out.'

FIRST VIRGINIA CATTLE SHOW.

The American Farmer of the 6th inst. contains an account of the proceedings of the Fredericksburgh Agricultural Society at a meeting held on the 13th and 14th of November; and of the Cattle Show exhibited on this occasion; which it appears was the first which has been exhibited in Virginia. At this meeting, resolves were passed, approving of the proposition of the Albemarle Society for the establishment of an Agricultural Professorship at the University of Virginia—for presenting the thanks of the meeting to J. S. Skinner, Esq. editor of the American Farmer, "for the many instances of polite attention to the interests and wishes of the Society, which we have experienced at his hands, and for his meritorious labours in the cause of agriculture generally," and approving of the "elegant workmanship displayed on the premium plates awarded by the society; and, that the artist, Mr. Warner, of Baltimore, be respectfully recommended to the patronage of our sister societies."

Among the premiums awarded were a silver pitcher with emblematic device and description, cost $33, to Mr. Ira Lipscomb, for a fine stallion; a silver pitcher, which cost $28 to Col. George Love for his bull Pluto, besides a silver cream cup and several silver mugs to several individuals for fine animals of different kinds. Likewise a silver mug, value $15, to Mr. McCormick for the best plough; and also a discretionary premium of $5, for an Angular Balance, by which to ascertain the force necessary to move a plough. Among the articles exhibited were Pine-Apple Cheeses, a Wheat Fan, two Cutting Boxes, a Drill Plough for planting corn, a beautiful Counterpane, &c. &c.

The mode of trying ploughs by a force equal to a certain number of pounds weight, has not, so far as we know, been adopted in New-England. We therefore give that part of the account entire as it may perhaps suggest useful ideas to some of our agriculturists. —EDIT. *New-England Farmer.*

"Of the Ploughs, there were only three tried; McCormick's, Wood's or Freeborn's, and Cochran's. The committee here subjoin their calculations, and leave it to the public to decide.

M'CORMICK'S.

	Width of furrows.	Depth.	Force.
1st trial	16 inches	7 inches	330
2d do	14	8 1-2	330
3d do	15 1-2	7	330
4th do	14	7 1-2	330

FREEBORN'S.

1st trial	15	5 1-2	350
2d do	15	5 1-4	350
3d do	13	5 1-2	350
4th do	15	5 1-2	350
5th do	14	4 1-2	350
6th do	13	6	350

COCHRAN'S.

1st trial	12	5 1-2	350
2d do	11	5 1-2	350
3d do	11	5	350
4th do	11	4	340

"But the most singular exhibition of all, and one that caused general amusement, was the spectacle of two little goats completely harnessed and attached to a cart, in which sat the driver, a man weighing nearly 200 pounds, who coursed his proud looking little steeds about with much apparent ease and security. They were perfectly tractable and true to the draft. This equipage, although intended by the worthy proprietor merely for amusement, conveys a good practical lesson to husbandmen. It shows, in a striking manner, what things may be accomplished with our domestic animals by a *proper course of education.*"

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